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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,269	12/27/2000	David S. Dunning	P9455	4851

8791 7590 08/02/2004

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EXAMINER

TSE, YOUNG TOI

ART UNIT PAPER NUMBER

2637

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/749,269

Applicant(s)

DUNNING ET AL.

Examiner

YOUNG T. TSE

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-26, drawn to a method or apparatus of recovering data from a modulated data signal, classified in class 375, subclass 371.
  - II. Claim 27, drawn to a method for performing decisions, classified in class 375, subclass 360.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group I and Group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case of the different inventions, the method or apparatus of recovering data from a modulated data signal in Group I is based on the estimation of an average phase of previously detected edges and the determination of whether a first symbol was received multiple times consecutively prior to a detected pulse edge, however, the method for performing decisions in Group II of determining the assignment of a registered transition to a current bit period is true or false is based on the determination of whether a last two bits are different and if a dead zone transition has occurred.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Edwin Taylor on 23 July 2004 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-26. Affirmation of this election must be made by applicant in replying to this Office action. Claim 26 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Drawings***

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: the reference sign "60" mentioned on page 11, line 3 of the specification is not shown in Figure 6. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be

labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: the reference sign "80" shown in Figure 7 is not mentioned in the specification. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in

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upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

**Applicants note the specification does not include the section heading (f) BRIEF SUMMARY OF THE INVENTION.**

8. The disclosure is objected to because of the following informalities: on page 4, line 22, "26" should be – 28 --. Appropriate correction is required.

### ***Claim Objections***

9. Claims 4-13 and 17-24 are objected to because of the following informalities: in line 2 of claims 4-6 and 17-19, the phrase "a long transition" should be – the long

transition – for clarity; in line 4 of claims 7 and 20, “another” should be – another consecutive sequence --; in claim 7 (line 2), claims 9-11 (line 2), claim 21 (line 3), claim 22 (line 2), claim 23 (lines 2-3), and claim 24 (line 2), “a single second symbol” and “a trailing edge” should be – the single second symbol -- and -- the trailing edge --; in claim 12, lines 10 and 11, “a current” and “a first symbol” should be – a current bit period -- and -- the first symbol --, respectively; and in claim 13, lines 2 and 3, “an average phase” and “signals” should be – the average phase – and – signal --, respectively. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 25 (lines 4, 5 and 8), claim 4 (lines 4 and 5), claims 5 and 6 (lines 4 and 4-5), claims 9-11, 17, 22 and 24 (lines 4 and 5), claim 12 (lines 9 and 9-10), claim 14 (lines 7, 8 and 11), claims 18 and 19 (lines 3, 4 and 5), claim 23 (line 5), and claim 26 (lines 6, 7 and 10), the phrases “previously detected edges”, “the received stream of data”, “the detected pulse edge”, “said threshold”, “the received data signal”, “the detected edge”, and “said detected pulse edge” all lack antecedent basis.



In claim 3, lines 1-2 and claims 4-6, lines 3-4, what is the difference between "a threshold number of consecutive symbols" and "a number of consecutively received symbols"? Also see claims 8-11 and 16-19.

In claim 4, line 3 and claim 5, line 3, what is the difference between "a current bit period" and "a subsequent bit period"?

In claim 12, line 4 and line 6, what is the difference between "a detected edge signal" and "an edge signal"?

In claim 12, lines 1-2 and line 2, what is the difference between "an average phase of detected edges" and "an average phase"?

Wherein the dependent claims 2, 7, 13, 15 and 20 are depended upon claims 1, 12 or 14.

***Allowable Subject Matter***

12. Claims 1-26 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

13. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to show or suggest a method or apparatus of recovering data from a modulated data signal based on the estimation of an average phase of previously detected edges and the determination of whether a first symbol was received multiple times consecutively prior to a detected pulse edge.

**Conclusion**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ito discloses an asynchronous serial data receiving device capable of accurately detect a start bit, even if large noise occurs, son as to correct counting operation for clocks which are used for extraction of input serial data.

Julyan et al. discloses a method and apparatus for receiving and reconstitution an input digital data signal representing a sequence of values.

Ryan discloses an apparatus for receiving and asynchronous data signal includes a clock generator to generate a clock signal having a frequency approximately equal to the bit rate of the asynchronous data signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Young Tse** whose telephone number is **(703) 305-4736**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jay Patel**, can be reached at **(703) 308-7728**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

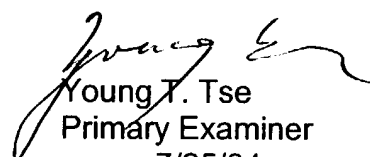
**or faxed to:**

**(703) 872-9306**

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
Young T. Tse  
Primary Examiner  
7/25/04